

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A composite material comprising a porous semiconductor impregnated with at least one beneficial organic substance to a pore depth from the surface of the semiconductor of at least 5 microns, wherein the beneficial organic substance is present in an amount of at least 15 % by weight, based on the weight of the material.
2. (Original) A material according to claim 2 wherein the porous semiconductor is impregnated with at least one beneficial organic substance to a pore depth from the surface of at least 50 microns.
3. (Currently Amended) A material according to claim 1 or ~~claim 2~~ wherein the porous semiconductor is doped or undoped silicon, germanium, silicon carbide or silicon nitride.
4. (Original) A material according to claim 3 wherein the porous semiconductor is silicon.
5. (Original) A material according to claim 4 wherein the silicon is resorbable.
6. (Original) A material according to claim 5 where the silicon is mesoporous.

7. (Currently Amended) A material according to ~~any of claims~~claim 4 to 6 wherein the porous silicon has a porosity of from 40% to 90%.

8. (Currently Amended) A material according to ~~any preceding claim 1~~ wherein the beneficial organic substance has a solubility in aqueous media of no more than 10mg/mL at a pH range 1-7.

9. (Currently Amended) A material according to ~~any preceding claim 1~~ wherein the beneficial organic substance has a melting point of below 300⁰C.

10. (Original) A material according to claim 9 wherein the beneficial organic substance has a melting point of below 100⁰C.

11. (Currently Amended) A material according to ~~any preceding claim 1~~ wherein the beneficial organic substance is selected from chlorambucil, amitriptyline, ibuprofen, procaine, levamisole, plumbagin, cyclophosphamide, busulfan, dexamethasone, lauric acid, medroxy progesterone acetate, vitamin K, vitamin E, paclitaxel and rifampicin or a mixture thereof.

12. (Currently Amended) A material according to ~~any preceding claim 1~~ wherein the beneficial organic substance is present in an amount of from 15% to 85% by weight, based on the weight of the material.

13. (Currently Amended) A material according to ~~any preceding claim 1~~ wherein the beneficial organic substance is distributed substantially uniformly through the pores of the semiconductor.

14. (Currently Amended) A pharmaceutical composition comprising a material according to ~~any preceding claim 1~~.

15. (Original) A pharmaceutical composition according to claim 14 in the form of an implant or particles.

16. (Currently Amended) Use of a material according to ~~any of claims~~ claim 1 to 13 or a composition according to claim 14 or claim 15 in therapy.

17. (Currently Amended) A method of delivering a beneficial substance to a patient in need thereof comprising delivering to the patient a composition according to claim 14 or claim 15.

18. (Original) A method for preparing a composite material comprising a porous semiconductor impregnated with at least one beneficial organic substance, wherein the beneficial organic substance is present in an amount of at least 15% by weight based on the weight of the composite material, comprising the steps of:-

- i) bringing the beneficial organic substance into contact with the porous semiconductor; and

- ii) allowing the beneficial organic substance to impregnate the porous semiconductor, the impregnation being performed at a temperature which is at or above the melting point of the beneficial organic substance.

19. (Original) A method according to claim 18 wherein the impregnation is brought about by the steps of:-

- i) heating the porous semiconductor to a temperature at or above the melting point of the beneficial organic substance;
- ii) bringing the beneficial organic substance into contact with the heated porous semiconductor, thereby causing the beneficial organic substance to become molten; and
- iii) allowing the molten beneficial organic substance to impregnate the porous semiconductor.

20. (Original) A method according to claim 18 wherein the impregnation is brought about by the steps of:-

- i) heating the beneficial organic substance to a temperature at or above its melting point, thereby causing the beneficial organic substance to become molten;
- ii) bringing the molten beneficial organic substance into contact with the porous semiconductor; and
- iii) allowing the molten beneficial organic substance to impregnate the porous semiconductor.

21. (Original) A method according to claim 18 wherein both the porous semiconductor and the beneficial organic substance, independently, are heated to a temperature at or above the melting point of the beneficial organic substance and then brought into contact together to allow impregnation to occur.

22. (Currently Amended) A method according to ~~any one of claims~~claim 18 to 21 wherein the impregnation is performed at a temperature of from 40⁰C to 200⁰C.

23. (Original) A method according to claim 22 wherein the impregnation is performed at a temperature of from 60⁰C to 130⁰C.

24. (Currently Amended) A method according to ~~any one of claims~~claim 18 to 23 wherein the impregnation is performed at a temperature of from 5⁰C to 15⁰C above the melting point of the beneficial organic substance.

25. (Original) A method for preparing a composite material comprising a porous semiconductor impregnated with at least one beneficial organic substance, wherein the beneficial organic substance is present in an amount of at least 15% by weight based on the weight of the composite material, comprising the steps:-

- i) dissolving the beneficial organic substance in a solvent for the beneficial organic substance;
- ii) bringing the solution of part(i) into contact with the porous semiconductor; and

iii) allowing the beneficial substance to impregnate the porous semiconductor, the impregnation being performed at a temperature in the range of from 40⁰C to 200⁰C.

26. (Original) A method according to claim 25 wherein the impregnation is performed at a temperature of from 60⁰C to 130⁰C.

27. (Currently Amended) A method according to claim 25 or 26 wherein the impregnation is performed at a temperature which is at or above the boiling point of the solvent for the beneficial substance.

28. (Currently Amended) A method according to ~~any one of claims~~ claim 25 to 27 wherein the impregnation is performed at a temperature which is at or above the melting point of the beneficial organic substance.

29. (Currently Amended) A method according to ~~any one of claims~~ claim 25 to 28 wherein the impregnation is brought about by the steps of:-

- i) dissolving the beneficial organic substance in a solvent for the beneficial organic substance;
- ii) heating the porous semiconductor to the temperature at which impregnation is to be performed;
- iii) bringing the solution of part(i) into contact with the heated porous semiconductor; and

- (iv) allowing the beneficial substance to impregnate the porous semiconductor.

30. (Currently Amended) A method according to ~~any one of claims~~claim 25 to 28 wherein the impregnation is brought about by the steps of:-

- i) dissolving the beneficial organic substance in a solvent for the beneficial organic substance;
- ii) heating the solution of part (i) to the temperature at which impregnation is to be performed;
- iii) bringing the heated solution of part(ii) into contact with the porous semiconductor; and
- (iv) allowing the beneficial substance to impregnate the porous semiconductor.

31. (Currently Amended) A method according to ~~any one of claims~~claim 25 to 28 wherein both the porous semiconductor and the solution of beneficial organic substance, independently, are heated to the temperature at which impregnation is to be performed and are brought into contact together to allow impregnation to occur.

32. (Currently Amended) A method according to ~~any of claims~~claim 18 to 31 wherein the semiconductor is silicon.

33. (Currently Amended) A method according to ~~any of claims~~claim 18 to 32 wherein

the beneficial organic substance has a melting point of below 300⁰C.

34. (Currently Amended) A method according to ~~any of claims~~claim 18 to 33 wherein the beneficial organic substance is selected from chlorambucil, amitriptyline, ibuprofen, procaine, levamisole, plumbagin, cyclophosphamide, busulfan, dexamethasone, lauric acid, medroxyprogesteron acetate, vitamin K, vitamin B, paclitaxel and rifampicin or a mixture thereof.

35. (Currently Amended) A method according to ~~any of claims~~claim 18 to 34 wherein the porous semiconductor is heated to a temperature of from 100⁰C to 250⁰C prior to being brought into contact with the beneficial organic substance.

36. (Currently Amended) A method according to ~~any one of claims~~claim 18 to 35 wherein the porous semiconductor and beneficial organic substance are maintained in contact for a period of from 1 minute to 2 hours.

37. (Original) A method of enhancing the bioavailability of a beneficial organic substance on administration to a subject comprising, impregnating a porous semiconductor with said beneficial organic substance and delivering the impregnated material to the subject.

38. (Original) A method according to claim 37, wherein the semiconductor is silicon.

39. (Original) A method according to claim 38, wherein the porous silicon has a porosity of from 40% to 90%.

40. (Currently Amended) A method according to ~~any of claims~~claim 37 to 39, wherein the beneficial organic substance has a solubility in aqueous media of no more than 10 mg/ml at a pH in the range 1-7.

41. (Original) Use of a material comprising a porous semiconductor impregnated with a beneficial organic substance to deliver said beneficial organic substance to a subject in order to enhance the bioavailability of the beneficial organic substance on administration to the subject.